



US009543469B2

(12) **United States Patent**
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(10) **Patent No.:** **US 9,543,469 B2**
(45) **Date of Patent:** **Jan. 10, 2017**

(54) **III NITRIDE SEMICONDUCTOR EPITAXIAL SUBSTRATE AND III NITRIDE SEMICONDUCTOR LIGHT EMITTING DEVICE, AND METHODS OF PRODUCING THE SAME**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **14/904,207**

(22) PCT Filed: **Aug. 6, 2014**

(86) PCT No.: **PCT/JP2014/071351**

§ 371 (c)(1),

(2) Date: **Jan. 11, 2016**

(87) PCT Pub. No.: **WO2015/020233**

PCT Pub. Date: **Feb. 12, 2015**

(65) **Prior Publication Data**

US 2016/0172534 A1 Jun. 16, 2016

(30) **Foreign Application Priority Data**

Aug. 9, 2013 (JP) 2013-166377

(51) **Int. Cl.**

H01L 33/06 (2010.01)

H01L 33/12 (2010.01)

(Continued)

(52) **U.S. Cl.**

CPC **H01L 33/06** (2013.01); **C30B 29/403** (2013.01); **C30B 29/68** (2013.01);
(Continued)

(58) **Field of Classification Search**

CPC H01L 33/06; H01L 33/007; H01L 33/12;
H01L 33/32; H01L 21/02507; H01L
21/0254

See application file for complete search history.

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(57) **ABSTRACT**

A III nitride semiconductor epitaxial substrate having more excellent surface flatness is provided, in which the problems of crack formation and the double peaks in the shape of the EL spectrum are mitigated by employing appropriate conditions for Si doping on an AlN layer on a substrate; a III nitride semiconductor light emitting device; and methods of producing the same. A III nitride semiconductor epitaxial substrate has a substrate of which at least a surface portion

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